



IN THIS ISSUE

**Tribute to a
Modern Pioneer**... 2

**Water
Improvements**... 3

**Provo River
Project**... 4

**Kent Gray
Retirement**... 5

News Briefs... 6

**Adopt a
Waterbody**... 8

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Celebrating 50 Years of Clean Water in Utah

The year 2003 marks the 50th anniversary of the Utah Water Pollution Control Act. In 1953, the Utah Legislature enacted one of the first water quality laws in the nation. It created a Water Quality Board to address pollution problems, established water quality standards, allowed for classification of waters according to uses, and required treatment of waste discharges from municipalities and industries.

"Utah was a pioneer in recognizing the need to protect and preserve the state's water resources. It was one of the first states to achieve secondary treatment of sewage in every community," said Don Ostler, director of the Utah Division of Water Quality.

During the past 30 years, Utah has achieved a number of milestones that have greatly contributed to better water quality for all Utahns. For example,

- Utah is now able to monitor 75 percent of our 16,000 miles of streams and 95 percent of our lakes based on acreage.
- Permitting programs are now in place to protect sur-

face and ground water. There are 1,134 surface water permits and 119 ground water permits to control pollution discharges.

- Plans have been completed to restore one-third of Utah's impaired waters.
- More than 700,000 Utah households are now connected to modern sewer systems served by treatment plants that meet pollution standards.
- \$443 million of federal and state monies have been provided to help Utah communities build wastewater treatment facilities.
- Water quality has been maintained and improved in spite of substantial population growth.

Where do we go from here? Many of the easy pollution reduction strategies have been accomplished. More difficult and expensive approaches must be employed in the future to avoid degradation of our water quality. In the next 30 years and beyond, Utah will aggressively work to restore the remaining impaired water bodies, improve manure management at animal feeding op-

erations, reduce pollution from urban runoff, and maintain the competent core pollution control programs that have achieved the progress we see today.

Individual responsibility also plays a key role in protecting Utah's water quality. "One of the important lessons learned from the past 30 years is the need for grassroots participation in caring for the natural resources that benefit us locally," Ostler said.

All citizens are encouraged to take care of and protect water resources for current and future generations. "What each of us does on a daily basis affects water quality. Therefore, we are all part of the solution by preventing water pollution. It can be as simple as keeping trash out of our water bodies; not dumping used oil, antifreeze, pesticides, paint, and paint solvents in the trash or gutters; planting drought-tolerant plants; and becoming a water conservationist," Ostler said.

DEQ applauds the good efforts of citizens and environmental groups that are working to mitigate damage to streams and lakes.

Lynn Thatcher

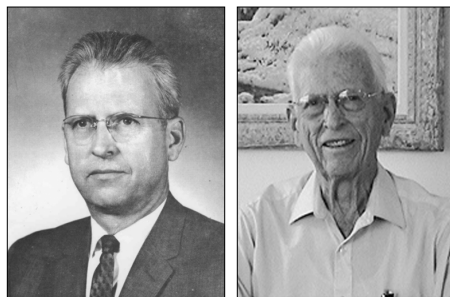
A Tribute to a Modern Pioneer

At 90 years old, Lynn Thatcher recalls well his 45-year career building Utah's environmental programs. He mostly remembers the time and effort it took to get the water improvement programs moving forward. But he persisted, and today we enjoy a high quality of life because of his labors so many years ago.

When Thatcher began his career with the State of Utah in 1933, he and a part-time secretary were the entire state environmental health program. Sewage and drinking water treatment were the only active programs and were located in the Utah Department of Health. By the time he retired in 1978, Thatcher had increased the environmental health program to include air quality, solid waste, and radiation control. By then 100 employees were on board. Today, Environmental Quality is its own department; employs 400 employees; and has added programs in hazardous waste, environmental response, and environmental clean up.

Indeed, we have come a long way and credit Thatcher as the man who began it all. He was a pioneer to our modern way of life — clean, drinkable water and the move from outhouses and septic tanks to sewage treatment. He was a visionary, too. Under his leadership, Utah enacted the Water Pollution Control Act in 1953, nearly 20 years ahead of the 1972 federal Clean Water Act.

But getting to that point was rough. In the beginning, Thatcher traveled a lonely road, trying to convince communities they needed wastewater and drinking water treatment. "Why do we need to change?" they asked. "The financial costs are too high," they said. So Thatcher told them why modern treatment was necessary to preserve public health and why the investment



Left: Lynn Thatcher at the peak of his career, which spanned 45 years from 1933 to 1978. Right: Lynn Thatcher today at 90 years old.

was worth it; he told them not just once but over and over again. Finally, the message caught on.

"I visited every town and knew every mayor in Utah," Thatcher recalls. "I thought that if I visited them every year and told them the same story, eventually someone was going to catch on." And catch on they did — gradually. "The more I went along, the easier it became to get people on board. However, until we had the Utah Water Pollution Control Act, I had to sell the concept of modern water treatment."

"I don't think any of us these days appreciate how hard that was," says Don Ostler, who was hired as an engineer a few years before Thatcher retired. Ostler now directs the Division of Water Quality and serves as the Executive Secretary of the Water Quality Board.

"Yes, it was a long haul and took a long time and effort," Thatcher says. "The key was educating the public and local officials about environmental health. Once they understood what we had to do and the benefits, they embraced the concept of modernizing."

Thatcher also credits the support of Gov. Cal Rampton. "I served under six governors. Cal Rampton served for three terms. We had differences of opinion from time to time, but he sup-

ported me and that paved the way for me," he says.

To be sure, there were many lessons learned along the way. "I got acquainted with outstanding engineers and we learned to review construction plans for the treatment facilities very carefully," Thatcher says. "The people we hired were so good and fit so well. They did the job that had to be done. That left me free to work with the Legislature and start building other environmental programs."

When he reflects on his greatest accomplishment, he can't pick just one. However, he feels a special sense of accomplishment when he thinks about what it took to establish what is now the Division of Water Quality.

"Yes, I started the programs from scratch and built them, but I didn't do it alone," Thatcher says. "I get great satisfaction out of seeing what has happened in the state, the improvements that have been made."

We extend thanks to Lynn Thatcher for his service to us, the future generation, and for his vision of a modern way of life that kept him going for 45 years in a place he called home. "With a bachelor's degree from Utah State University in civil engineering and graduate work at M.I.T., he could have worked almost anywhere he wanted, yet he chose to work here in Utah in this field long before it became popular," Ostler says.

Even at 90 years old, Thatcher is still modernizing, although at a slower pace. He used a push lawnmower until last year when he finally bought his first motor lawnmower. Ironical for a man who set trends rather than tried to keep up with them. We have come a long way indeed.

Water Improvements

Benefit Communities

Clean water is a keystone of a livable community. For years, Utah has provided resources to communities throughout the state for improvements to drinking water and for the treatment of sewage.

Environmental Connection highlights three communities that have improved their quality of life and protected their environment and health in large part due to financial assistance from the Drinking Water Board and Water Quality Board.

Green River, Emery County

Problem: Drinking water treatment facility losing its ability to treat the water; problem getting worse as time went on; inadequate water pressure and flow to customers east of the river.

Solution: Replace the 25-year-old drinking water treatment facility; construct a water distribution line to customers east of the river.

Benefits: Safer, higher-quality, better-delivered drinking water.



Photo taken June 27, 1985, during a health hazard inspection in Smithfield, Utah. Residents mingle while raw sewage seeps up from the ground just a few feet away.

Smithfield, Cache County

Problem: Immediate public health hazard due to inadequate soil conditions for proper operation of septic tank/drainfield systems; raw sewage seeping up through the ground or being discharged directly to a waterway or the ground; anyone who came in contact with raw sewage at an increased risk of getting sick.

Solution: Discontinue the use of septic tanks; construct a sanitary sewer system to connect Smithfield residents and businesses to the sewer treatment facility in nearby Logan.

Benefits: Elimination of an immediate public health hazard; increased property values; improved quality of life.



Spanish Valley's new tank is constructed to hold 3 million gallons of drinking water.

Spanish Valley, Grand County

Problem: Not enough water to meet the needs of the growing community; not enough tank capacity for water storage; pipes too small, resulting in low water pressure, backflow potential, and low water flow.

Solution: Drill a new water well; construct a tank to hold at least 3 million gallons of water; improve distribution of drinking water with larger pipes.

Benefits: Better delivery of safer, more adequate drinking water.

Students Discover Health of Provo River

A Provo High School science teacher and his students embarked on an exciting four-month quest not knowing how it would all end. They spent their summer on the Provo River, collecting samples of the water from the Uintah Mountains all the way down to Utah Lake. They wanted to know one simple thing: Is the water quality of the Provo River good or bad?

What they discovered pleased them — and concerned them. After collecting water samples at 30 sites along the river and

analyzing the data, they concluded that the Provo River is generally in good shape, especially near Jordanelle Dam. However, as the river meanders to more populated areas, the quality of the water degrades somewhat.

“The cleanest water we had all summer was just below Jordanelle Dam,” said science teacher Ty Robinson. “It was cool, clear, and had good oxygen content. Not surprisingly, the dirtiest water was in Provo. But overall, the river is clean.”

In addition, Robinson and his students confirmed that what goes down storm drains impacts the health of the river. Storm drains capture water flowing across streets and parking lots. As it flows, the water picks up trash, dirt, oil, animal waste, fertilizer, and other things left behind by motor vehicles, people, and animals. This polluted water, known as runoff, goes directly into our streams, lakes, and rivers. Runoff pollution affects fish and other wildlife and can also contaminate drinking water supplies.

“We saw evidence of runoff pollution toward the end of the Provo River where the population base is located,”



Provo High School students Laura Durrant and Gregory McFarlane take a sample of water from the Provo River.

Robinson said. “That part of the river receives water from storm drains.”

Robinson and his students also learned that water conservation makes a difference. Unnecessary water use not only contributes to water shortages but also adds to the volume of wastewater that must be treated by sewage treatment plants. Conservation helps preserve the environment by decreasing pollution.

“The Provo River Watershed will retain its high quality and beauty if we improve our efforts to protect it,” Robinson said.

Don Ostler, director of the Utah Division of Water Quality, echoes that sentiment. “In this time of substantial population growth, the only way we will have success is if we increase our knowledge of water pollution and commit to change personal habits.”

Robinson said their project barely scratched the surface compared to what others are doing. So, why then go to all the effort? “The Provo River is our life blood,” Robinson said. “The river is in good shape, but we need to take better care of it.”

There’s still more to be done. This project produced 20 spin-off projects that Robinson and his students can’t wait to begin. “The Provo River has been the best teaching tool I’ve ever had, and my students are excited about doing more,” he said.

To help with the Provo River project, Robinson recruited about seven high school students but said that as many as 50 people worked on some aspect of the project. They consulted water experts from the

Central Utah Water Conservancy District and Utah Division of Water Quality. In addition, Robinson was able to use the hydrogeology lab at Brigham Young University (BYU) to analyze their samples. The students also used an electron microscope at BYU to take pictures of diatoms, a unique form of algae.

If you would like to participate in a similar project, please contact Shelly Quick at (801) 538-6516 or squick@utah.gov. You can read more about the Adopt a Waterbody Program on Page 8.



Provo High School science teacher Ty Robinson shares good news about the Provo River with a reporter and cameraman from KSL Channel 5.

DEQ Division

Director Retires

Kent P. Gray has retired as the director of the Division of Environmental Response and Remediation. His last day at DEQ was Dec. 31, 2002.

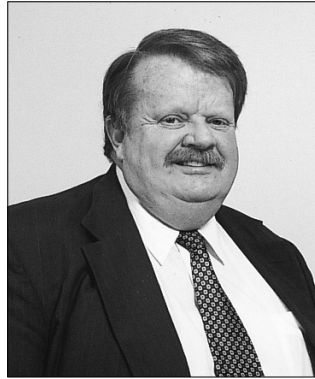
"Utah is cleaner because of Kent Gray's work," said DEQ Executive Director Dianne Nielson. "Thousands of underground storage tanks and contaminated sites have been cleaned up under his leadership, and his expertise has shaped the state's Superfund work with EPA. The environment and the citizens of Utah have benefited from his commitment."

Gray worked for nearly 32 years for the State of Utah in both DEQ and the Department of Health. He became the director of the Division of Environmental Response and Remediation when DEQ became a department in 1992.

As the director, Gray oversaw the development and implementation of waste cleanup programs and the coordination of environmental emergency response. He also served as the executive secretary regarding underground storage tanks to the Solid and Hazardous Waste Control Board. He was instrumental in developing many of Utah's hazardous waste and cleanup programs, including the Voluntary Cleanup Program.

Additionally, Gray chaired the Underground Storage Tank Advisory Task Force and co-chaired the state Emergency Response Commission. His involvement in the Association of State and Territorial Solid Waste Management Officials positively influenced state and federal policies regarding Superfund, underground storage tanks, and solid and hazardous waste.

"I'm pleased to have had the opportunity to work for state government," Gray said. "I'm proud of the great work my staff has done in cleaning up soil and ground water at thousands of contaminated sites. The division has made significant progress in improving the environment and protecting public health."



Kent P. Gray



Pollution Prevention Awards

The Pollution Prevention (P2) Association, of which DEQ is a part, recognized five Utah businesses for their accomplishments in preventing pollution. The P2 Outstanding Achievement Award was given to Hill Air Force Base. The Utah Olympic Oval, Alliant Aerospace Company, and Frito Lay West Valley Plant received the Meritorious Achievement Award. Gillies Stransky Brems Smith Architects was recognized for excellence in sustainable design standards.

Find It On the Web

Water Conservation

www.conservewater.utah.gov/

Water Quality

www.waterquality.utah.gov/

Drinking Water

www.drinkingwater.utah.gov/

For Kids

www.epa.gov/kids/water.htm

Environmental Education

www.usee.org/

Pollution Prevention

www.deq.utah.gov/EQOAS/poll_prev/prevent_pollution.htm#water

Superfund Manager Named Acting Division Director



Brad Johnson

Brad Johnson, Superfund manager in the Division of Environmental Response and Remediation, has been named acting division director in place of Kent Gray, who retired in December 2002.

Johnson began his work with DEQ as an environmental scientist 19 years ago. He has been a manager in the Superfund program for the past 14 years.

"My goal in the next few months until the new director is selected is to maintain the excellent quality of work and service we've all come to know under Kent's leadership," Johnson said.

News Briefs

Environmental Olympic Awards

The Utah Environmental and Public Health Alliance (EPHA) and the Environmental Advisory Committee (EAC) to the Salt Lake Organizing Committee received Environmental Achievement Awards from EPA for their outstanding work to protect the environment and public health during the 2002 Winter Olympic Games.

In addition, the Commissioner of the Food and Drug Administration awarded a special citation to



EPHA "for outstanding teamwork and commitment ... in helping make the 2002 Winter Olympics ... safe and successful for all the athletes, participants, and spectators." The citation is one of the highest honors given by the FDA.

EPHA consisted of federal, state, and local environmental and public health agencies. DEQ provided leadership and planning support to both EPHA and EAC.

Manager Wins National Award

Gayle J. Smith, manager of permitting and compliance in DEQ's Division of Water Quality, has been awarded the prestigious 2002 Walter F. Snyder Award by the National Sanitation Founda-



Gayle Smith

tion International and the National Environmental Health Association for achievement in attaining a quality environment and improving public health. For the past 31 years, Smith has improved public health by addressing drinking water needs in Utah and nationally.



At the Charitable Fund kickoff (front row, left to right): David Richards, Rocky Mountain Rescue Dogs; Julie Felice, DEQ employee and member of the Charitable Fund Board; Elaine York, Nature Conservancy of Utah; Lori Rupp and Kay Malone, Karl Malone Foundation for Kids; and Dianne Nielson, DEQ Executive Director and Charitable Fund Campaign Chair.

DEQ Executive Director Chairs Charitable Fund Drive

DEQ's Executive Director Dianne Nielson chaired the 2003 Utah State Employees Charitable Fund Campaign, which ran from Oct. 9 to Nov. 22, 2002. Two DEQ employees, Julie Felice and Roger Bishop, volunteer as members of the Charitable Fund Board. Founded 47 years ago, the Charitable Fund is a Governor-established and supported program wherein state employees can make charitable donations. Every penny donated is

paid to the specific organization chosen by the employee.

"I'm proud of the charitable contributions made by state employees," said Gov. Mike Leavitt. "This is a time of great need in our state and it is rewarding to see state workers extend their public service in this way."

In 2002, state employees donated \$480,243 to charities of their choice through the Charitable Fund.

Local Group Recognizes DEQ Planner

Bruce Slater received the 2002 Lynn Thatcher Award from the Utah Environmental Health Association for his contributions to the field of environmental health. Slater is the environmental programs planner at DEQ and also serves as the local health department liaison for DEQ.

A significant contribution was Slater's development of a statewide comparative risk assessment in 1996, which prioritized environmental concerns. The information serves as the foundation of an ongoing, dynamic local/state/federal partnership to identify and address environmental concerns.

As the environmental health planner, Slater develops the annual Environmental Service Delivery Plan used by DEQ and local health departments, and prepares the annual Performance Partnership Agreement between EPA and DEQ.

DEQ to Provide Environmental Information in Real Time

The Utah Department of Environmental Quality has taken another important step forward in providing more efficient delivery of environmental services online. Through a \$338,944 information technology grant from EPA, DEQ will share environmental data with EPA and other partners over the Internet. The project will provide Utahns with meaningful, real-time access to information about the condition of the environment where they live and work.

The grant is part of EPA's National Environmental Information Exchange Network (NEIEN). DEQ has been heavily involved in the development of NEIEN and was one of the first five states to participate in the One-Stop Reporting Project. The One-Stop Reporting grant allowed DEQ to build a web-enabled warehouse of permit and compliance information for all regulated sites and facilities in Utah. It is accessible on the Web at www.deq.utah.gov.

With this new NEIEN grant, DEQ will be able to move into the next phase of development. Specifically, the grant will be used to:

- Establish a centralized database that stores information as well as exchanges it with EPA via the Internet.
- Create an automated single point of entry so that data is uniform and standardized.
- Implement an automated quality assurance process at the time data is entered to ensure accuracy and reliability of the data.

"This project is significant because once the data is entered into the database, it is automatically assured for accuracy and becomes available immediately online for anyone to review at anytime," said Brent Bradford, deputy director of DEQ. "It gives us a more accurate picture of our environment, simplifies the way we do business, and makes this information available in real time."

In 2000, DEQ established the Environmental Information Management Initiative (EIMI) in response to Gov. Leavitt's e-government initiative to make state government more efficient and accessible online. Under EIMI, DEQ's business process is enhanced and simplified using information technology. The NEIEN grant is an important step forward in DEQ's goal to build an integrated, seamless process that provides simple access to accurate information 24/7/365 via the Internet. DEQ expects to complete the project by June 2003.

"Choose Clean Air" Receives Awards

The "Clean Air Utah" interactive Web site (www.cleanair.utah.gov) received a Golden Spike Award from the Utah chapters of the International Association of Business Communicators and Public Relations Society of America. DEQ launched the informational Web site in June 2002 as part of the "Choose Clean Air" program in an effort to reduce air pollution. Golden Spike Awards are given annually to recognize excellence and best practices in communications and public relations in Utah.

In addition, the Utah Medical Association presented DEQ with an Environmental Award for developing the "Choose Clean Air" program. One goal of the program is to increase awareness and empower people to take individual responsibility for the air they breathe by providing them with choices and information.

Storm Water Permitting System Now Online

Utah has become one of the first states in the nation to launch an online application process for the storm water construction permit. The new process is another step in Gov. Mike Leavitt's vision of conducting state government business electronically.

The online system allows the operator of a small or large construction activity to apply and pay for permit coverage online. The application takes about 20 minutes to complete. Permit coverage is then issued on the spot.

"The online application offers a quick and convenient way to get a permit," said Division of Water Quality Director Don Ostler. "A lengthy plan review process is not required prior to permit issuance." Because the electronic process is more efficient, it also saves state resources.

A landowner or primary contractor who plans a construction activity that will disturb one or more acres of land is required to obtain a permit. The application requirement may be waived for a small site if construction is occurring within a Phase I or Phase II municipal area. The permit may also be waived for a small site if construction will be started and finished — meaning paving, revegetating, or placing similar erosion controls in place — between January 1 and April 30 of the same calendar year.

Whether an actual permit is needed or conditions warrant one of the two waivers, "good housekeeping" practices are still required during construction, according to Ostler. State rules require everyone to plan and then control storm water sediment and erosion to the maximum extent practical.

The permit application can be found online at www.waterquality.utah.gov/updates/stormwater.htm.

Adopt a Waterbody

We all have a stake in keeping Utah's water clean. Help give something back to nature.

Adopt a Waterbody is an innovative community involvement program designed to benefit Utah's water resources and be rewarding and educational for the volunteer groups involved. The program's goals are to:

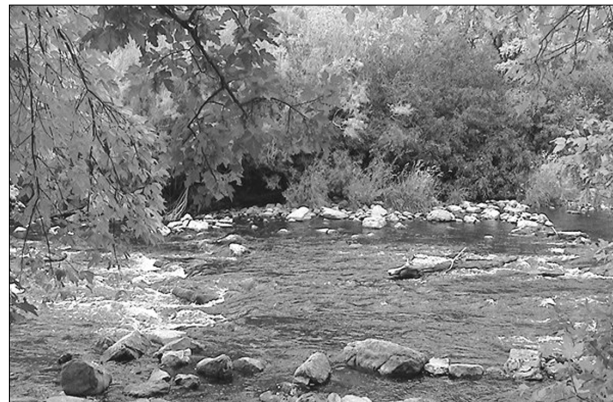
- Promote water education activities.
- Encourage partnerships involving private groups and public agencies.
- Advocate pollution prevention through personal stewardship projects.
- Acknowledge the water quality education/improvement efforts of individuals and groups.

Any individual or group can adopt a public surface or ground water re-

source, such as a lake, pond, stream, or wetland. Some of the types of groups already involved in the program include individuals; schools; scouting troops; local governments; and civic, environmental, and nonprofit organizations. Most groups adopt small sections of waterways near their homes or organizations.

Adoption means making a commitment to become an active steward for a specific resource area. Groups can take care of a water resource in a variety of ways, such as

- Organizing a cleanup day.
- Monitoring water quality.
- Mapping pollution sources in the watershed.



Provo River near Nunns Park in Provo Canyon

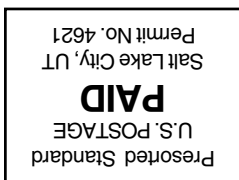
- Writing educational articles.
- Organizing a Clean Water Fair.
- Stabilizing streambanks with vegetation.
- Building trail or water access points.

For more information, please contact Shelly Quick at (801) 538-6516 or squick@utah.gov. Information is also available on the Web at <http://ag.utah.gov/mktcons/aaw-flyer2.pdf>.



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